What is claimed is:

1. A method for identifying a plurality of infectious particles in a sample comprising;

separating an infectious particle containing fraction,

extracting at least two nucleic acids from the fraction,

sequencing at least a portion of the at least two nucleic acids or a complementary sequence thereof, and

determining the identity of the infectious particles from the sequence or by overlapping sequences derived from plural nucleic acids.

2. The method of claim 1 wherein the sample is a mixture of biological samples from plural individuals.

3. The method of claim 1 further comprising comparing the sequence of the nucleic acids to a database of known sequences.

4. The method of claim 3 wherein a new infectious particle is detected.

5. The method of claim 4 wherein a known infectious particle is simultaneously detected.

6. The method of claim 4 wherein plural new infectious particles are simultaneously detected.

7. The method of claim 1 wherein the infectious particle is not cultured.

8. The method of claim 1 wherein the nucleic acids are amplified in copy number between extracting and sequencing.

9. The method of claim 1 wherein said fraction is separated by centrifugation.

10. The method of claim 9 wherein the infectious particles band at a density between 1.05 and 1.3 gm/ml and exhibit sedimentation coefficients between 80 and 1,500 S.

11. The method of claim 1 wherein said fraction is separated by filtration and a retentate is recovered.

12. The method of claim 1 wherein said at least one nucleic acid is RNA and further comprising synthesizing a DNA complementary to said RNA.

13. The method of claim 3 wherein the database contains nucleic acid sequences from known infectious particles or the sequences of the species from which the biological sample is obtained.

14. The method of claim 1 wherein said nucleic acids are cleaved such that overlapping fragments are formed.

15. The new infectious particle identified by the method of claim 4.

16. The method of claim 1 wherein the sample is an aliquot from a composition intended for contacting a living organism.

17. The composition tested by the method of claim 16 and the results indicate no unwanted infectious particles are present.

18. A true infectious particle-free germ stock which lacks detectable infectious particles having densities of 1.05 to 1.3 gm/ml and sedimentation coefficients of 80 to 1,500 S.

19. The true infectious particle-free germ stock of claim 18 wherein the infectious particles are dsDNA, ssDNA, ssRNA or dsRNA viruses.

20. An oligonucleotide of at least 13 nucleotides complementary to or the same as the nucleic acid sequence of said new infectious particle of claim 4 and which is not complementary to a nucleic acid sequence of a known infectious particle.

21. A method for producing antibody against an infectious particle comprising;

separating an infectious particle with antibody bound thereto containing fraction from a biological sample

contacting said infectious particle with antibody bound thereto with a reagent and under conditions which disassociates the antibody from the infectious particle, and

recovering free antibody.

22. The method of claim 21 wherein the separating is centrifuging a biological fluid.

23. The method of claim 22 wherein the fraction is a band at a density between 1.05 and 1.3 gm/ml and a sedimentation coefficient between 80 and 1,500 S,

24. The method of claim 21 wherein the biological fluid is a mixed biological fluid from multiple individuals.

25. The method of claim 21 wherein plural free antibodies to plural infectious particles are recovered.

26. Free antibody specific for an infectious particle produced by the process of claim 21.

27. The method of claim 21 further comprising directly or indirectly attaching said free antibody to a label or solid phase.

28. Free antibody specific for an infectious particle directly or indirectly attached to a label or a solid phase produced by the process of claim 27.

29. A method for separating infectious particle specific antibody comprising;

immobilizing an infectious particle antigen on a solid phase,

contacting the immobilized infectious particle antigen with a mixed antibody containing liquid from plural individuals for a time sufficient for specific antibody to be bound to immobilized infectious particle antigen, and

separating the solid phase containing the specific antibody from the liquid.

30. The method according to claim 29 further comprising eluting and recovering the specific antibody from the solid phase.

31. The method of claim 29 wherein the mixed antibody containing liquid is from a plurality of healthy individuals with no sign of current or past infection from the infectious particle.

32. A specific antibody to an infectious particle composition produced by the process of claim 30.

33. The method of claim 30 further comprising directly or indirectly attaching said antibody to a label or solid phase.

34. The antibody specific for an infectious particle directly or indirectly attached to a label or a solid phase produced by the process of claim 33.

35. A specific antibody to an infectious particle composition produced by the process of claim 31.

36. The method of claim 31 further comprising directly or indirectly attaching said antibody to a label or solid phase.

37. The antibody specific for an infectious particle directly or indirectly attached to a label or a solid phase produced by the process of claim 36.

38. A method for producing specific antibody to a new infectious particle comprising;

immobilizing an antigen of the new infectious particle identified by the method of claim 4 on a solid phase,

contacting the antigen with an antibody containing liquid from for a time sufficient for specific antibody to be bound to immobilized antigen, and

separating the solid phase containing the specific antibody from the liquid.

39. The method of claim 38 further comprising eluting and recovering the specific antibody.

40. The method of claim 38 wherein the antibody containing liquid is convalescent serum from at least one individual exposed to the new infectious particle.

41. The method of claim 38 wherein the antibody containing liquid is a mixed liquid from plural individuals with no sign of current or past infection from the infectious particle.

42. A specific antibody to a new infectious particle composition produced by the process of claim 39.

43. The method of claim 39 further comprising directly or indirectly attaching said free antibody to a label or solid phase.

44. The antibody specific for an infectious particle directly or indirectly attached to a label or a solid phase produced by the process of claim 43.

45. A method for making an antibody comprising;

determining at least a part of an amino acid sequence of the antibody of claim 26, 32, 35, or 42,

obtaining a DNA encoding at least a part of the determined amino acid sequence,

expressing the DNA to produce an expressed antibody having at least a part of the determined amino acid sequence, and

recovering the expressed antibody.

46. The expressed antibody produced by the method of claim 45.

47. A method for purifying an infectious particle antigen comprising;

immobilizing the antibody of claims 26, 32, 35 or 42 to a solid phase,

contacting an infectious particle antigen containing liquid with the solid phase for a time sufficient to allow immobilized antibody to bind to the new infectious particle,

separating the solid phase from the liquid.

48. The method of claim 47 further comprising eluting and recovering the infectious particle antigen.

49. The infectious particle antigen produced by the method of claim 42.

50. The method of claim 42 further comprising directly or indirectly attaching said infectious particle antigen to a label or solid phase.

51. The infectious particle antigen directly or indirectly attached to a label or a solid phase produced by the process of claim 44.

52. A method for making an antigen comprising;

determining at least a part of an amino acid sequence of an antigen of the infectious particle of claim 15 or the antigen of claim 43,

obtaining a DNA encoding at least a part of the determined amino acid sequence,

expressing the DNA to produce an expressed antigen having at least a part of the determined amino acid sequence, and

recovering the expressed antigen.

53. The expressed antigen produced by the method of claim 46.

54. A vaccine comprising an infectious particle antigen of claim 47 and a pharmaceutically acceptable carrier.

55. A method for enriching a mixture of infectious particles in a biological sample for those particles that infect a host comprising;

obtaining antibodies from the host or a group of hosts;

contacting the biological sample with the antibodies; and

recovering infectious particles bound to the antibodies.

56. The method of claim 49 wherein the antibodies are obtained from multiple healthy people.

57. The method of claim 49 wherein the antibodies are obtained from one or more patients who have contracted or recovered from a known or suspected viral disease.

58. The method of claim 49 wherein the antibodies are obtained from individuals from multiple geographic, social, cultural, climatic or historical regions.

59. The method of claims 1, 21, 29, 38, 47 or 49 wherein the method is performed in a containment system.

60. An apparatus for manipulating infectious agents comprising;

a containment system having at least one air lock and enclosing devices for manipulating an infectious agent,

robotic apparatus for liquid sample handling inside the containment system,

robotic apparatus for infectious particle separation inside the containment system,

robotic apparatus for extracting nucleic acids from the infectious particles inside the containment system,

an adjustable controller outside the containment system, and

signal connections between the adjustable controller and each robotic apparatus inside the containment system,

wherein the controller effects operation of the robotic apparatus.

61. The apparatus of claim 54 wherein infectious agents enter but live infectious agents do not leave the containment system.

62. The apparatus of claim 54 wherein every controllable apparatus inside the containment system is controlled by the controller.